Unit 1: Introduction to Technology

Content Area: **Technology**
Course(s):
Time Period: **September**
Length: **1 week**
Status: **Published**

Enduring Understandings

- Technology and science differ.
- Technology has evolved since the beginning of time.
- Technology education is an essential part of our ever-changing world.
- Safety is number one priority in the technology lab.

Essential Questions

- What is technology?
- How has technology affected our environment?
- What is the difference between science and technology?
- How are science and technology interrelated?
- How does one impact the other?
- How can injuries be avoided in the workspace?
- What are consequences of not following safety procedures in the workplace?
- What population is at the greatest risk of injury in the workplace?

Content

Skills

- Students will be able to explain the difference between science and technology.
- Students will properly handle tools, machinery and equipment in the classroom.

Suggested Activities: Timeline Safety skits

Resources

1. PC or Laptops with internet access, able to run Adobe Illustrator (or similar program) and the various 3D printer software platforms.

2. Laser Printer allows for printing capabilities from classroom computers.

3. TinkerCAD (or other equivalent solid modeling program). TinkerCAD is a free, web-based 3D modelling application which allows users to create objects utilizing constructive solid geometry applications.

4. 3D Printers allow students to realize their designs by producing physical objects from their three-dimensional digital models.

5. Adobe Illustrator & Photoshop are industry recognized graphic art software programs. Adobe presently offers a creative cloud suite for education.

6. Vacuum forming machine is a simplified version of thermoforming. In this process, a sheet of plastic is heated then stretched over a preformed mold. The plastic is then shaped into the shape of the mold. This machine allows for exciting project based learning opportunities in the Manufacturing and Production unit.

7. Drill press and bandsaw are presently located in the Technology Workshop, the machines are fixed and utilized only with teacher supervision and proper safety testing accomplished.

8. Consumable Materials such as bass and balsa wood, foam, hot glue, project kits, aluminum foil, wax paper, balloons, fishing line, cups and other materials are needed to support project based learning. Suggested projects include building a model architectural structure, room or facility, bridge, tower, aircraft and more.

9. Personal protection equipment such as safety goggles and gloves are required when students are at risk of injuring themselves while creating projects or utilizing tools and/or machinery.

10. Hand Tools various hand tools such as easy cutters, coping saws, craft knives, hot glue guns and hot wire cutting machine will be utilized within the classroom. Safety precautions and training will be taken and provided at all times.

Standards

TECH.8.2.8.B.1	Evaluate the history and impact of sustainability on the development of a designed product or system over time and present results to peers.
TECH.8.2.8.B.2	Identify the desired and undesired consequences from the use of a product or system.
TECH.8.2.8.B.3	Research and analyze the ethical issues of a product or system on the environment and report findings for review by peers and /or experts.